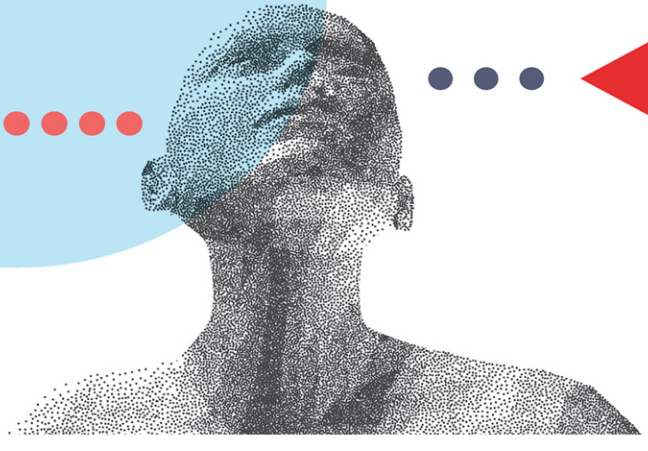
GEORGE W. ANDERSON

DESIGN THINKING FOR TECH

SOLVING PROBLEMS AND REALIZING VALUE IN 24 HOURS



FREE SAMPLE CHAPTER |

"In the complexity of creating tech solutions for today's ever changing and uncertain environments, design thinking is an invaluable tool. In this book, George delivers the knowledge and resources that will help your team develop human-centered and valuable results quickly."

—Karen Zeigler, Design Thinking Consultant and Host of "Cultivating Potential" Podcast

"A terrific practical guide that shows how to navigate unstructured ambiguous situations using proven techniques... 24 hours spent with this book is one of the best investments you will ever make in yourself and for your team."

—Paul Slater, CEO and Co-Founder, BillionMinds

"George lays out the path for IT teams to inject Design Thinking across the project lifecycle to more quickly solve key business challenges, noting that Design Thinking methods should not be relegated solely to designers and UX experts but rather used broadly by the whole tech community for velocity and progress."

—Bruce Gay, PMP, Principal and Founder, Astrevo

"George understands that the most challenging activity for Design Thinking practitioners is getting other people to adopt their ideas. Hour 23 in particular is a great asset for those trying to make sure their change lands and adoption of their ideas is realized."

—Luis Solano, Industry Development Manager, Google Cloud

"The value George brings to the Design Thinking community through *Design Thinking for Tech* is best conveyed in this adaption of a quote from the book: We must capitalize on who we are today, the investments we make in ourselves, and the ability we have to provide value beyond today. Design Thinking gives us that framework for realizing value, and in these pages George walks us through when and how to apply methods within this framework so together we can build the confidence and capabilities necessary to solve the next generation of problems using applied Design Thinking."

—Sean McGuire, Billboard Design Thinking Founder, Architect, and Author

This page intentionally left blank

George W. Anderson

Design Thinking for Tech:

Solving Problems and Realizing Value in 24 Hours

Pearson

Design Thinking for Tech: Solving Problems and Realizing Value in 24 Hours

ISBN-13: 978-0-13-793303-7
ISBN-10: 0-13-793303-7

Library of Congress Control Number: 2022944622

ScoutAutomatedPrintCode

Trademarks

Warning and Disclaimer

Special Sales

Editor-in-Chief
Mark Taub

Signing Editor
Malobika Chakraborty

Development Editor
Chris Zahn

Managing Editor
Sandra Schroeder

Senior Project Editor
Tonya Simpson

Copy Editor
Chuck Hutchinson

Indexer
Kenneth Johnson

Proofreader
Paula Lowell

Editorial Assistant
Cindy Teeters

Cover Designer
Chuti Prasertsith

Compositor
Tricia Bronkella

Pearson's Commitment to Diversity, Equity, and Inclusion

Pearson is dedicated to creating bias-free content that reflects the diversity of all learners. We embrace the many dimensions of diversity, including but not limited to race, ethnicity, gender, socioeconomic status, ability, age, sexual orientation, and religious or political beliefs.

Education is a powerful force for equity and change in our world. It has the potential to deliver opportunities that improve lives and enable economic mobility. As we work with authors to create content for every product and service, we acknowledge our responsibility to demonstrate inclusivity and incorporate diverse scholarship so that everyone can achieve their potential through learning. As the world's leading learning company, we have a duty to help drive change and live up to our purpose to help more people create a better life for themselves and to create a better world.

Our ambition is to purposefully contribute to a world where

- Everyone has an equitable and lifelong opportunity to succeed through learning
- Our educational products and services are inclusive and represent the rich diversity of learners
- Our educational content accurately reflects the histories and experiences of the learners we serve
- Our educational content prompts deeper discussions with learners and motivates them to expand their own learning (and worldview)

While we work hard to present unbiased content, we want to hear from you about any concerns or needs with this Pearson product so that we can investigate and address them.

Please contact us with concerns about any potential bias at https://www.pearson.com/report-bias.html.

Contents at a Glance

PART V: Iterating for Progress

Table of Contents

Figure Credits

Cover

Rarinlada/Shutterstock

Login/Shutterstock

Login/Shutterstock

Chapter

Figure 18.2: Microsoft

Foreword

George Anderson and I first met in 2011, when I became his colleague at Microsoft. It was my first job at Microsoft, and George had only been there a few months longer than I, but it never seemed like it. As I struggled with impostor syndrome and felt almost completely unable to cope with the demands and workload around me, George seemed to be able to calmly get things done. He was, how can I put it? Just in control.

It was hardly surprising that within a few short months he was my manager. As I learned more about him, I could never quite figure out how one person could just DO so much. He and I were close to each other in age, but somehow this guy had managed to squeeze in an MBA and PhD, regularly taught at university, volunteered at his church, *and* had written nearly a dozen books. Oh, and yes, somehow there was a wife and three kids in there as well. How infuriating!

Once I'd got over my inferiority complex, I realized that I had the good fortune to be around someone I could really learn from. As we worked closely together, I was in a sense a "George" apprentice. While I never nailed it quite like him, I could do a pretty good approximation.

Over time, our careers at Microsoft diverged, and we moved from friendly colleagues to friends who would catch up for dinner when he was in town. I never stopped learning from every interaction.

Then around 2019, I realized something I never had realized before about George. Yes, he was remarkable, but remarkable in a different and accessible way. Meet a basketball great, and chances are you know 1) They are superb at what they do, and 2) You will never be as great as them, no matter what you do. But George's particular version of greatness is completely approachable, completely accessible, and even attainable. I may have felt that I could never accomplish what he had, but through his personal interactions with me, his lived example, and through his written work he was literally giving me the roadmap to accomplish what he had accomplished in a practical and step-by-step kind of way. A master of empathy immersion, his written works served as roadmaps that we could all walk together.

This latest book provides you with a roadmap for navigating the complex and the hidden, from someone who has spent a lifetime focusing deeply on how he uses every hour of every day to get the most out of himself and make a difference in the world around him. My advice is to read it, absorb it, learn the techniques, perform the exercises, and expand your career and life. It's written for technology professionals, but just about anyone who is trying

to figure out work and life will benefit from the read. It's like George—smart, but deeply approachable and practical.

In 2020, I left Microsoft and formed a company called BillionMinds. Our mission is to help a billion people master tough work environments through behavior change. Every day we work with people to develop a new set of skills, to become in a sense more like George. So, take it from me, it can be done. Change is not only possible but accessible through the kinds of techniques and exercises explained here. Use this book to help master the uncertainty in front of you and the ambiguity surrounding you. Don't let this be the book you get only halfway through and leave on the shelf. Let George help you as he has helped me and so many others, and you will surely be forever changed and, dare I say, grateful.

—Paul Slater, CEO and co-founder, BillionMinds

Preface

There has never been a more appropriate season for thinking and executing differently than the last several years. In that time, we have endured the tragedies and impact of a global pandemic, unforeseen drama around elections and masks and vaccinations, a global recession, the horrors of war and racial inequity, and tremendous changes in the workplace. We've also experienced working from home and sleeping at work, shifting to living life remotely, returning to new normals several times only to go back to remote living, adjusting to massive inflation, and so much more.

In the midst of this chaos and churn, more than ever we are looking for calm and clarity wherever we can find it. And they seem in short supply. Against this backdrop of chaos and change, there are still too many people personally and professionally

- Adapting by standing still, clinging to what we know and what has worked in the past—even after it's clear that the old norms and ways of thinking will never help us get to a better tomorrow.
- Pushing back against untried ways of thinking and executing given all the changes we have already been forced to accommodate or work through.
- Looking in exhaustion for greener grass, often accepting any kind and color of grass as long as it's different from the old grass.

We are fighting harder than ever against further change as we seek to control the little we can actually control. We need a better way to think through challenges and solve our most difficult problems. A better way to navigate uncertainty by taking the next best step. A better way to cut through the ambiguity surrounding us and our situations. We need help, and we need it more than ever. There's never been a better time to think and execute differently, to put Design Thinking to the test in our most cherished and prized circles at home, at work, and in our lives.

Prologue

Have you ever felt as if you were simply not creative or imaginative enough? Do you need to solve tough problems? Are you interested in delivering value throughout a project rather than exclusively at the tail end? If you said yes to any of these questions, then the Design Thinking mindset is actually perfect for you. And no, you don't need to be a designer to use Design Thinking. You just need to be human.

At its core, Design Thinking is about creative problem solving, using trial and error to build and test prototypes targeting the right problem to create the best solution. Design Thinking has been successfully adopted throughout the business, academic, and nonprofit sectors. It helps improve user alignment and understanding across an entire team. And its iterative nature complements other popular practices in the technical field.

In the following pages, George lays out the path for us and for our teams to begin using Design Thinking to solve our company's, our customers', and even our own personal challenges and toughest problems.

It's an interesting and practical approach, too. George doesn't tackle the status quo by turning every meeting into a Design Thinking workshop. On the contrary, George lights up the way to real progress by building the Design Thinking process into *how we already operate, communicate, and get things done*. Rather than bolting on a new way of thinking and executing, he instead thoughtfully injects techniques and exercises into the very fabric of our projects and initiatives.

In this way, Design Thinking becomes another intrinsic enabler for success rather than something we are asked to apply when someone wants to paint a vision, prototype an idea, or deliver a retrospective.

So don't allow Design Thinking to be relegated to designers and user experience experts! And don't simply stand on the sidelines. Everyone in the Tech community, and frankly anyone interested in thinking and doing things smarter, needs it. Jump in and learn how Design Thinking fundamentally changes your own personal and professional playing field!

—Bruce Gay, PMP and Principle/Founder of Astrevo

About the Author

George Anderson is a program director for Microsoft and an adjunct professor and guest lecturer for several universities. George holds Stanford Innovation & Entrepreneurship as well as Innovation Leadership credentials, PMI's Wicked Problem Solving and Prosci's Change Practitioner certifications, an MBA with a focus in Human Resource Management, and a PhD in Applied Management and Decision Sciences.

As a program director, George assembles and leads global tech teams that help organizations transform themselves. George's architects and consultants provide the technology and business skills necessary to design and develop business-enabling technology solutions, and George and his project managers provide the leadership, governance, and communications necessary to deliver those solutions.

In these ways, George's teams solve problems that drive meaningful change and measurable value. George knows first-hand the power of thinking and executing differently to change our world and often shares those learnings and experiences. He has co-led worldwide design thinking communities within Microsoft and has incorporated design thinking techniques and exercises into several of Microsoft's governance methods and project delivery methodologies.

Since 2002, George has also been assembling authoring teams to publish popular technology planning and implementation books, including *Teach Yourself SAP in 24 Hours* (2015) and *SAP Implementation Unleashed* (2009). More recently, he has shared how Design Thinking can be applied to our work and personal lives through *Stuck Happens: 95 Simple Life Hacks for Thinking and Thriving* (2021). And George and his team shared guidance and techniques organized around PMI's Process Groups in *Design Thinking for Program and Project Management* (2019).

Design Thinking for Tech: Solving Problems and Realizing Value in 24 Hours marries George's love of people, high-tech software development, platform-based business solutioning, and Design Thinking. It bridges the real-world intersection of technology and more than 130 Design Thinking techniques and exercises useful in learning, empathizing, and solving difficult problems while providing early and repeatable value along the way. Connect with George on LinkedIn or through email at George.Anderson@Microsoft.com.

Dedication

This book is dedicated to Michelle, the love of my life and a long-time Design Thinker. Her natural ability to effortlessly connect deeply with others, walk beside them, rally around their toughest situations, and work alongside them through solutions to those situations captures the essence of Design Thinking. In these ways, she helps others solve some of the hardest problems imaginable on the journey to leading a richer, valuable, and more fulfilled life.

Her vocation? Pastor, Wife, and Mom.

Acknowledgments

As usual, I have too many people to acknowledge and too little space to do so. Thank you to my fellow Design Thinking colleagues and enthusiasts across Microsoft's Design Thinking communities, LinkedIn's various Design Thinking groups, and my own colleagues and customers spanning several decades of global technology initiatives, programs, and projects.

I want to especially call out Bruce Gay, Sean McGuire, Prashant Mittal, Karen Zeigler, Luis Solano, Brennan Lynch, Amir Naghmi, Jeanette Sjoberg, Darhyl Watkins, Drew Gervino, Rebecca Whitworth, Rick Furino, Paul MacDonald, Mike Carr, Jeffrey Johnson, Michael Pigg, Noopur Hegde, Seema Garg, Charles Lamanna, Suneel Mathur, Michelle Newton, Gregg Barker, Danyal Farooq, Lori Stockton, Jenn Goth, Brent Hawkinson, Jose Mata, Dave Spear, Sharon Long, Jon Greville, Pierre-Frederic Jaffre, James Paley, Ryan Tan, Ming Chao, Puneet Gupta, Bryan McMillan, Laura Martelli, Shaily Nair, Perry Lanaway, Tom Ball, Tim Litton, Rob Standefer, Brian Seitz, Bill Cunnane, Sanjay Lobo, Nita Copley, Phyllis Rhodes, Fazil Osman, Al Rothfuchs, Rick Nye, Don Ballard, Karen Richardson, Paul Mirts, David Driftmier, Bharani Srinivasan, Angelo Cotanidis, Anna MacWilliams, Michael Herold, Adebola Ibironke, Gregory Lisiak, Michael Litman, John Turner, Danny Borden, Sanjay Lobo, Tom Frederick, John Dobbins, Tim Rhodes, Julie Chandler, Andreas Jenzer, Naeem Hashmi, Leonard Glass, Srini Jasti, Brianna Ritter, Teja Immidi, Melanie Putlak, Juergen Imhoff, Marc Ashbrook, Mike Wise, JD Meier, Dave Sanders, Jony Lawrence, Yoav Intrator, Hardy Utley, Jeff Davis, Judson Althoff, Satya Nadella, Uli Homann, and Paul Slater, along

with my customers and colleagues around the world. Together, you have helped demonstrate throughout the years how, when, and where it makes sense to apply Design Thinking to Tech. And you have helped me find balance while keeping us grounded in the the real world of delivering value in the toughest situations around the globe.

Thank you also to the team supporting Wicked Problem Solving at the Project Management Institute, the instructors at the LUMA Institute, and the professors and speakers connected to Stanford's d.school for inspiring me by how you embody and demonstrate the best of human-centric thinking. I am grateful for the abilities you have given my teams and me to help others solve tough problems and realize value on our collective journeys to somewhere New, somewhere Better.

And finally, thank you to the One who makes all things possible. I can imagine no better life and no better way to serve than through and with the people you've placed in my path all these years. There is nothing too difficult, nothing impossible, with You by my side.

We Want to Hear from You!

As the reader of this book, *you* are our most important critic and commentator. We value your opinion and want to know what we're doing right, what we could do better, what areas you'd like to see us publish in, and any other words of wisdom you're willing to pass our way.

We welcome your comments. You can email or write to let us know what you did or didn't like about this book—as well as what we can do to make our books better.

Please note that we cannot help you with technical problems related to the topic of this book.

When you write, please be sure to include this book's title and author as well as your name and email address. We will carefully review your comments and share them with the author and editors who worked on the book.

Email: community@informit.com

Why Design Thinking for Technology Professionals?

Let's get to the matter at hand and set the stage for why Design Thinking for technology professionals and those who manage technology projects is so important. The short answer? Because it's needed.

Technology and digital transformation, whether embodied in a six-week tech assessment project or spanning an entire global business transformation, is essential for those organizations that wish to be around in another five years. Technology enables organizations to change how they go to market, how they operate, and how they better serve their customers and communities. We know this stuff. Technology is why these organizations will remain viable as they improve and wholly reimagine their current business capabilities, introduce new AI-enabled capabilities, reduce costs, streamline their technology footprint, enhance their global competitiveness, and more. Technology-enabled change supported with Design Thinking's techniques and exercises will help these same companies solve hard problems, make progress, and deliver value. Let's take a closer look at each of these.

Why Design Thinking? Solving Problems

Design Thinking is a difference maker, helping us solve problems that have lingered and remained unsolved. By replacing our focus on the problem with a focus on the people in the middle of that problem, we have a chance to look, learn, and think differently. We have a chance to humanize the problem. And that's really the key; a human-centric rather than problem-centric perspective helps us make the step-changes we need to solve those tough problems. Design Thinking gives us the ability and permission to pursue the kinds of incremental solutions we can put in place to make progress. Design Thinking helps us let go of long-held beliefs and attitudes and strike out in new ways—ways that might feel as if we're slowing down in the short term but lead to more complete solutions in the long term. Design Thinking connects people and teams, changing our mindset and our abilities, so we can move from trying to deliver perfection to actually incrementally solving some of the toughest problems and situations we face.

Why Design Thinking? More Ideas, More Progress

An important key to solving difficult problems lies in how many ideas we can bring to light; solving problems doesn't happen without the benefit of new thinking and therefore

lots of new potential or partial solutions. That's where Design Thinking's myriad of ideation techniques comes into play. With more ways of thinking comes more ideas and with it the ability to try and fail and then learn and ideate—so we can repeat that process again and again, doing so quickly enough to arrive at the "try and succeed" desired outcome that much faster.

Need an example? Consider one of the earliest and most prolific Design Thinkers, Thomas Edison. Edison and his team made 1,000 attempts to solve the problem of creating sustainable and reasonably priced electric-based light. He and his team understood the secret to progress, though. Progress is found in cycling through the "trying and failing and learning and ideating just a bit differently" process. Iterative learning and ideating allowed them to try and try again and again. Combined with great perseverance, Design Thinking paid off.

As we see above, while velocity plays a central role in success, paradoxically so, too, does our failures. It's the rapidly achieved little failures along the way that lead to learning, greater understanding, and ultimately to greater big-picture velocity. In this way, we can finish what others struggled unsuccessfully to achieve, as we see next.

Why Design Thinking? Speedier Value Creation

The best answer to the question "Why Design Thinking for technology?" lies in the power to not only solve problems but to deliver value and do so incrementally and therefore earlier than ever. By dramatically improving time-to-value, even incremental value, organizations benefit on several fronts. First, Design Thinking helps us navigate situations and challenges to ultimately arrive at the finish line faster than we otherwise could (if at all). And second, because we arrive at that finish line faster, we better preserve our budgets. We benefit in terms of the staff and resources that we can reallocate earlier than otherwise possible, because we avoided many of the pitfalls that would have taken us down costly sidetracks, stalls, and dead ends.

Third, by getting to the finish line faster, we also set up an organization to begin more quickly realizing the value of the solutions they've invested so much time in designing, developing, and delivering.

Fourth and even better, Design Thinking helps organizations realize value along the way, too, as we quickly and incrementally deliver something of value to those who desperately need it to simply remain viable. And as our teams intersect with other technology initiatives and projects in flight, Design Thinking techniques and exercises become the difference makers that help anchor others in ways to also make progress and deliver value at velocity.

Why This Book?

The Project Management Institute's Pulse of the Profession Report 2021 tells us that in 2020 approximately 12 percent of all projects failed, 34 percent experienced significant scope creep, only 55 percent completed on time, and only 62 percent completed within budget. And these were improvements over the previous year!

The failure rate is even higher for the most complex and ambiguous projects and initiatives. Experts and our own experiences tell us that between 50 percent and 70 percent of digital transformation projects fail in some kind of fundamental way, and of those that succeed, most still fall far short in achieving their business objectives and key results.

Here's the thing: the problems that these organizations face still remain unsolved. The problems continue to linger, dragging down effectiveness and affecting the organization's employees, customers, and ability to move forward in new and sustainable kinds of ways. These organizations are trapped in a dreadful video game, stuck on level 2 with no hope of beating the monster at the end and advancing to level 3. They don't just need another life or a do-over. They need new weapons.

Instead of new weapons, though, a new project or initiative invariably springs up to address the legacy problems and age-old monsters. New people get involved with vigor and energy but without the benefit of past lessons and experiences. And when they try to tackle those legacy problems, oftentimes in the same way as their predecessors, they also fail. Just like their predecessors. And the cycle repeats itself again and again. Where are the new weapons? What can make the difference to individuals and teams tasked with solving these problems?

This book and, much more importantly, the Design Thinking guidance, techniques, and exercises found here serve as the difference makers. In these ways, problems spanning areas like those listed here may be approached and solved differently, giving organizations not just the hope but the ability to thrive anew:

- Understanding and awareness of the landscape and problems today, including how the past has transpired to create today's situation
- Connecting with and deeply understanding the right people across an organization to learn and adapt
- Building and maintaining healthy and resilient teams
- Aligning on incremental approaches to solving tough problems
- Creating bite-sized "Agile" plans to tackle what's next versus trying to plan how to solve the entirety of a problem or situation

- Establishing a lightweight and tailored governance and communications framework among the minimum bodies, boards, and councils necessary to work effectively
- Incorporating a 360-degree view of stakeholder awareness and communications
- Setting and managing realistic expectations across internal and external stakeholders, including gaining and retaining executive sponsorship
- Understanding and identifying the right problems and priorities for solving them
- Driving new ways of iteratively thinking, solutioning, prototyping, demonstrating, and testing as a way of learning and course-correcting fast
- Balancing day jobs with technology project realities across an organization's landscape
- Blending the right level of business, functional, and technical skills among the various teams
- Building smaller and tighter feature teams where fewer people wear more hats and therefore innately benefit from the broader understanding and connections such teaming provides
- Identifying blind spots early to iterate or altogether avoid "we didn't know what we didn't know" syndrome
- Taking a broader view toward the dependencies surrounding the work we understand, keeping in mind that no new system operates in a silo
- Improving and adjusting communications as inevitable issues, challenges, and slippages arise
- Thinking through how to land change, how to effectively train users, how to manage adoption, and how to scale our work for the benefit of others

When we initially discussed this book project, we agreed it was important to share lessons learned from years of leading and delivering technology projects and complex business transformations. For this reason, we have included real-world lessons, real-life explanations, and common mistakes to consider. We will help you adopt new ways of thinking and working through uncertainty and ambiguity. We will teach you where and how to sidestep standard practices in favor of different techniques and exercises. We will help you bring people and teams together to create a stronger shared understanding and culture and explain what others have done so you can do the same thing faster and with greater benefit. Finally, we will show you how to gain a competitive edge as you employ Design Thinking

techniques and exercises as strategic enablers for delivering value earlier and strategic business outcomes faster.

We also wanted to provide a mechanism for applying what we are reading each hour in a way that really brings it all together. To this end, each hour concludes with an ongoing fictional case study highlighting each hour's material with questions and answers. The questions are not difficult but reinforce the content in a way that should make the learnings "sticky" and memorable.

The final answer to "Why this book?" simply lies in this: Our experiences are real, gleaned from a mix of global programs and complex technology projects across a breadth of industries. The timing is perfect to benefit from Design Thinking in solving tough problems and getting hard things done.

Organizing the Book

This book is organized into five parts that follow the phases of a simple Design Thinking Model for Tech outlined in Hour 1 and detailed in Hour 2 and throughout the book:

- Part I, "Design Thinking Basics," lays the groundwork for the book and comprises the first five hours. Here, we introduce Design Thinking, explaining the what, how, when, why, and who of Design Thinking. Then we walk through a simple four-phased model for Design Thinking and illustrate how that model applies to individuals as well as teams. We conclude Part I with how to organize and execute a Design Thinking session. With this foundation, we can begin walking through the phases laid out in the next four parts.
- Part II, "Understanding Broadly," focuses initially on the techniques and exercises we can use to understand the big picture or lay of the land. Then we turn our attention to connecting with, observing, and empathizing with the right people spanning that big picture. In this way, we can identify the right problems that need attention and focus on the techniques and exercises useful for understanding those problems.
- Part III, "Thinking Differently," considers the need and methods for externalizing the ideas trapped in our heads as a way to explore those ideas more deeply and with others. We look at techniques for thinking divergently, exercises for increasing creativity, and still other exercises for reducing and working through uncertainty. Part II concludes with problem-solving exercises that let us bridge the gap between those problems and the imperfect start of potential solutions to those problems.
- Part IV, "Delivering Value," introduces us to Design Thinking techniques and exercises that help us find and prioritize the next best steps toward value creation. As we

work on solutioning solo and through our small groups and teams, we learn how to unlock the value previously trapped in our problems and situations. Techniques for starting small help us move and deliver with velocity and conclude Part IV, setting the stage for how we continuously improve and scale.

- Part V, "Iterating for Progress," is about testing and iterating on feedback from that testing to learn and execute more repeatably. We cover techniques for iterating to refine our understanding of the big picture, the people involved, and the underlying problems, all to help us improve our solutions. As we cut through ambiguity to make progress, we also cover techniques and exercises for scaling our solutions and the way we deploy and support those solutions. The final two hours of Part V conclude with ways of improving how we think about and manage change and operate with velocity as we land solutions.

Like the Design Thinking model we will explore in the pages that follow, we will see how each part walks us stepwise through the model's phases. Each part also reminds us to loop back and learn so we may continuously refine our work. It's through this recursive nature of the Design Thinking process, and the techniques and exercises associated with each phase of the process, that we can together solve the tough problems we face while ultimately delivering measurable value and other benefits along the way.

Audience and Approach

If you wear a technology hat of any kind— if you lead, manage, deliver, equip others, or help support complex technology projects and business-enabled digital transformations— you will find this book useful:

- Product owners and product managers
- Scrum masters and Agile ceremony leads
- Workstream and feature team leads
- Program and project managers and other delivery leaders
- Enterprise architects, cloud solution architects, and all manner of solution and technology architects
- Business, technology, and functional consultants and analysts
- DevOps leads and web and application developers
- User experience and user interface specialists

- All manner of system and solution testers
- System end users, especially those tasked with helping to brainstorm, design, evaluate, and test new technology solutions
- Network infrastructure specialists
- Security specialists and privacy experts
- Data engineers and database administrators
- Technical integration specialists
- Cloud automation and deployment engineers
- Cloud operations engineers and other operations specialists
- Dashboard and reporting specialists
- Help desk and call center agents
- Tech executives, CIOs, CTOs, CDOs, and other IT leaders
- Executives, sponsors, and other transformation leaders
- Business managers and analysts
- IT risk management specialists
- Innovation and design specialists
- Change management and new-system adoption specialists
- Training specialists and other educators
- Students of Design Thinking, including anyone interested in learning how to apply the Design Thinking process and a host of techniques and exercises useful for problem solving and value creation

In light of the diversity of this audience, it was important to strike a balance in the breadth and depth of the material that yielded another important outcome: Every hour provides some kind of value to every reader, whether a beginner or long-time Design Thinking practitioner.

Thank you again for adding this book to your library!

HOUR 13

Exercises for Reducing Uncertainty

What You'll Learn in This Hour:

- Next-Step Thinking for Uncertain Situations
- Reducing Uncertainty and Ambiguity
- Working Through Uncertainty and What's Next
- What Not to Do: The Brute-Force Path
- Summary and Case Study

In this hour, we explore a special subset of Design Thinking techniques and exercises useful for reducing uncertainty. After working through Next-Step Thinking and establishing the differences between ambiguity and uncertainty, we learn four ways to move forward with greater certainty than otherwise possible. Then we explore seven techniques or exercises for determining the "next best step" when the path ahead is unclear. Hour 13 concludes with a "What Not to Do" focused on avoiding brute force in the face of ambiguity.

Next-Step Thinking for Uncertain Situations

Like fog, ambiguity hides the path in front of us. When there's really no way to illuminate the whole path, use the exercises in this hour to at least light up the portion of the path just ahead of us. Called Next-Step Thinking, this technique is essentially an "umbrella technique" for a whole collection of tips and exercises that have been used for years to make progress one step at a time.

That's really the goal: to move with intention through the journey, from one step to the next, acknowledging that not every step will be perfect, but every step will add learnings and therefore value. And with our roadmap of short-term, mid-term, and long-term horizons laid out, we can use other techniques covered this hour, such as Buy a Feature and MVP Thinking to build some consensus and make some strong initial progress. But then what? How do we get to that mid-term or next horizon?

To be clear, we probably need to first "control the controllable." And then we need to turn to Next-Step Thinking to think through how to make the jumps between our short-term, mid-term, and long-term horizons. Start with the thought that in between the various horizons or phases of our projects and initiatives lies the opportunity to think through how to

- Preserve and reuse what we (now) know
- Leverage our experiences and what we have accomplished
- Lean on the relationships we have built over time
- Acknowledge and fill in our gaps
- Recognize patterns and opportunities to help others
- Bring the whole of ourselves to a new problem or situation

Next-Step Thinking helps us conceptualize the broader situation, our team's skills, and what's probably needed as a stepping-stone to achieving what's next. Think about what our teams have done, and where, with whom, and how successfully, along with our track record of delivery.

In a more personal context, Next-Step Thinking is also an important part of capitalizing on who we are today, the investments we've made in ourselves, and the ability we have to provide value beyond today.

- Can we earn a promotion in-role by using today's success as an exemplar for why a promotion is merited?
- Can we extend our current success by growing the community we serve?
- Can we work with others to explore and tackle Adjacent Spaces (discussed later this hour) or seek out new ways of creating value?
- Can we grow our skills and reduce our gaps to take our manager's role? Or another leadership role?
- Should we take everything we've learned and accomplished to another organization that needs the kind of help we provide?

Consider the following principles for Next-Step Thinking:

- Become an expert at delivering value with what we have on hand; find success with what we have, who we have, and where we have it.
- The Important is more critical than the Urgent; ensure that the Important is delivered, even as a fast-follower to the Urgent.
- Meet people's needs where they are, and then figure out their next set of needs.

- Before moving to the next step or next challenge, take the actions necessary to ensure that solved problems don't devolve back into the old problems.

Most every exercise this hour represents a form of Next-Step Thinking. Let's start with four exercises that can help us take a smart step forward by minimizing the uncertainty, ambiguity, and risks that lay just ahead.

Reducing Uncertainty and Ambiguity

Thinking through less-risky and more-risky outcomes helps us expose areas of uncertainty and ambiguity, which in turn can help us make a smarter next best step. When we're faced with uncertainty, *reduce* that uncertainty the best we can through exercises including Possible Futures Thinking, Aligning Strategy to Time Horizons, Backporting into the Past, and Adjacent Space Exploration. Consider running two or more of these exercises sequentially too, essentially creating a custom recipe for reducing uncertainty.

Design Thinking in Action: Possible Futures Thinking

Jerome C. Glenn created the *Futures Wheel* in 1971, and today a wheel analogy is still a powerful and simple tool for thinking. The wheel and its various forms helps us organize our thoughts around a central idea or event. And as a method of Visual Thinking, this visually oriented Possible Futures Thinking exercise helps us model different versions of the future based on current-day trends or events and the possible consequences of those trends or events.

A Possible Futures Thinking exercise is easily done solo or with a group of people (on a physical or virtual whiteboard or through a tool like Miro or Klaxoon, for example). Use the wheel analogy to view a situation through the lenses of six categories or sections of the wheel. The original version of the *Futures Wheel* aligned these categories or sections to the acronym STEEP (which is another useful taxonomy for thinking in its own right, regardless of the method or tool):

- Social
- Technology
- Economic
- Environmental
- Political
- <and an empty sixth section of our own choosing>

The sixth "insert yours here" section of the wheel is a custom section available to us to categorize based on another dimension, emerging change, or a pattern we wish to think through. If we see

more than just one emerging change or pattern, such as an industry trend or a set of cultural realities we wish to consider, we may divide our wheel into eight sections or more. A classic six-section wheel is illustrated in Figure 13.1.

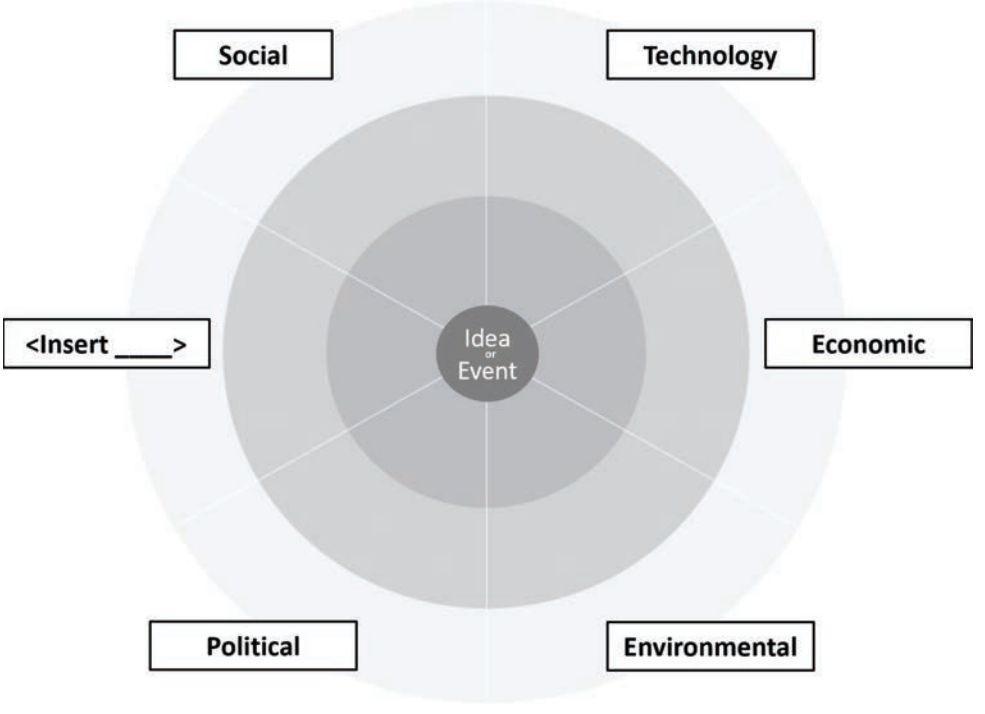


FIGURE 13.1
Use a simple wheel analogy to identify and explore a situation through the lenses of a number of sections or categories.

Now map out the future possibilities and what-ifs related to the intersection of our central idea with each of these dimensions or sections. As we work through the wheel, we should find ourselves thinking about opportunities, identifying risks and constraints, considering how to build consensus, thinking strategically about possible changes and their effects on those possible futures, and more.

Design Thinking in Action: Aligning Strategy to Time Horizons

When the next best step is apparent, the importance of the second and third steps might become more important more quickly than we're prepared to think through. Some say that this leap from the short-term to the mid-term horizon might be the most important too. The midterm is the bridge, after all, connecting what we know and do today (which is probably pretty

comfortable for us simply because it's known) to our long-term future that we can plan for and dream about but, frankly, cannot see.

Thus, Aligning Strategy to Time Horizons can become an important tool for thinking ahead by thinking backward (from the future to the present) organized around three steps:

- Create the overall Horizon Plan (which is necessarily high level and strategic but subject to the unknowns and therefore a bit aspirational as we look far out into the future).
- Create an initiative roadmap or project roadmap to provide more clarity near term (thus creating a mid-level and mid-strategic plan).
- Create a Release Plan with an underlying Sprint Plan, and the necessary project plan useful in navigating day-to-day tasks and near-term milestones (keeping details in our DevOps tool so we can keep our project plan as lightweight as possible, ideally focused on high-level milestones and dependencies with other work in flight).

Aligning Strategy to Time Horizons is a visual exercise, using bubbles that we place atop a time horizons template similar to the one displayed in Figure 13.2. Lay out these horizons and plans visually to help consider priorities, what might need to be executed as a prerequisite, what may be executed in parallel, and so on.

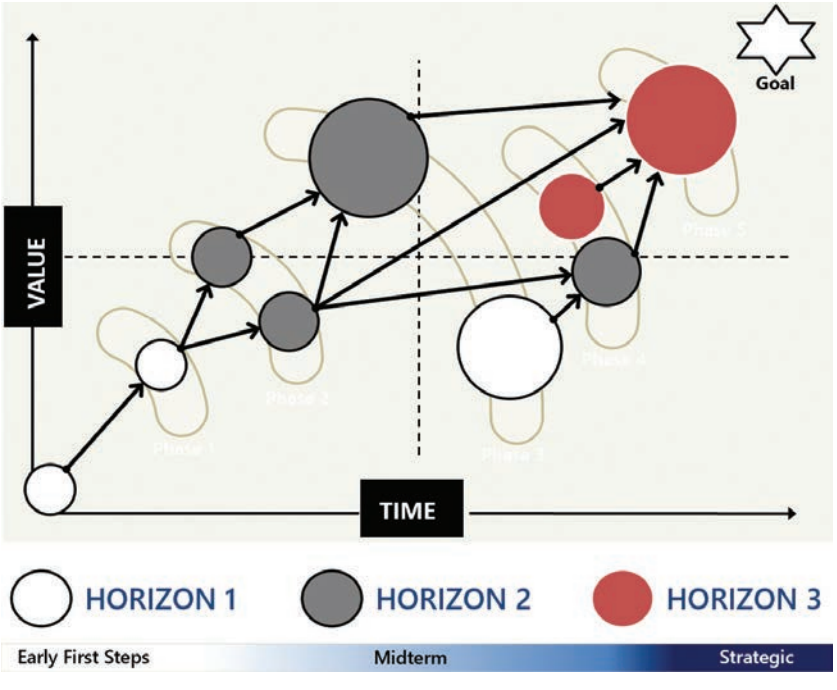


FIGURE 13.2
Use this worked example template to Align Strategy to Time Horizons.

Draw the first bubble in the long-term horizon and label that first bubble with something that describes what needs to be achieved long term. We might label it "Reinvent Our Team" or "Complete the Company's Business Transformation" or "Retire in Ten Years." The time frame—1 year, 4 years, 20 years—isn't as important as dividing the journey into the three big steps or milestones necessary to arrive at the final destination. And if it seems that the exercise highlights four or five steps, so be it! Just add a few more horizons to the template.

The second bubble reflects where we are today; now we have an end-to-end view that simply needs to be fleshed out. Do some thinking to create the third short-term bubble and fourth mid-term bubble. We might realize, for example, that we need to get a particular promotion or role or complete some education before we can pursue our mid-term goal.

If possible, lean on a colleague or friend who has successfully navigated most or all of this journey to help identify the various steps (bubbles) typically taken on this journey. As we identify those bubbles, place them in their respective short-term, mid-term, and long-term locations. Then connect the dots between the bubbles to visually depict stepwise priorities (Step 1, Step 2, Step 3) and dependencies (Step 1 and Step 2 might both need to be completed before we can arrive at Step 3, for example).

Once we finish mapping out the really large milestones on our journey, we might want to revisit those and flesh out the little stepping-stones in between the horizons. Go as deep and detailed as we need, but at some point employ a bit of Good Enough Thinking (Hour 11) and get started taking that important first step!

Combine this exercise with Possible Futures Thinking to consider three or four possible futures to get a better idea of which are the most achievable, most time-consuming, most expensive, most risky, and so on.

Design Thinking in Action: Backporting into the Past

In software development, backporting is "when a software patch or update is taken from a recent software version and applied to an older version of the same software" (CrowdStrike, 2022). We can use this approach to navigate the near term and breathe new life into how we view what's around us and unchangeable. In the name of playing the cards we have been dealt, or putting the team we have on the field, or working with what we know and who we have been given, Backporting into the Past can be exactly the kind of approach we need to reduce uncertainty.

Consider this: Rarely does a tech team have the opportunity to build a solution greenfield, or leverage a new set of platforms and tools, or just start fresh with a clean slate. More often than not we are faced with a massive amount of technical debt, legacy systems, and processes that we need to understand, adapt to in some areas, work around in other areas, and eventually transform.

As a Design Thinking technique, Backporting into the Past is about recognizing today's reality and limited set of choices, and then working within those choices and constraints to make something new happen. It helps us deal with uncertainty because we are not walking into a new situation to change it. Instead, we use what we have in front of us, the team we have to work with, and the skills and experience that we have in this present day—all of which is super valuable—to create options.

How? Let's start with a list:

- Identify the situation. What's unchangeable? What might be changed? Give this some thought and consider Snaking the Drain to clean out old ideas that just aren't viable or waste the time of others trapped by and thinking about them.
- Identify who we are as a subject matter expert. What are we really good at? What are our superpowers? Think through this and document it as a way to further think.
- Do the same with our team. What special set of skills can we collectively claim, what industries do we span, and where are the gaps? Identify the work that we have completed over the years. These experiences do not define who we are, but they are still our basis for credibility and experience spanning people, technology, business, and more. Dig deep and document these items.
- Identify what we love. What are we as individuals and as a team passionate about? What kind of job or role wouldn't even feel like work if we got to do it together 40 hours a week?
- Identify where we can quickly learn something new and where diminishing returns influence that kind of investment in time and energy and cost.

Finally, now comes the creative uncertainty-fighting value of this technique. Consider how we can backport ourselves and our teams into roles or projects similar to those that we have held before and (with our most recent experience and skills) give those new roles or projects fresh life. This Design Thinking technique is not just about narrowing down our choices and options, but about creatively adapting and reusing who and what we are in novel ways (Mittal, 2022). Accelerate to the future faster by injecting our current-day selves into new roles and projects that mirror old roles and projects.

Combine people and teams to create hybrid opportunities and new options. Write down these options! Think on these options solo and together. Brainstorm and Reverse Brainstorm with others to work through the unseen or unspoken. In the end, we should have a strong list of real options, crazy options, and a number of other opportunities in the middle.

Design Thinking in Action: Adjacent Space Exploration for Lower Risks

Can a neighboring future or similar-to-what-we-know option help us find a low-risk next step? Can such a next step serve as a time saver and choice maker? Yes! Instead of striking out in a brand-new direction, we might instead take a few steps down a lower-risk path that's adjacent to what we already know. Pursuing adjacent options or exploring adjacent spaces may not transform our future, but these methods can help us make meaningful progress in the short term.

Oftentimes we apply this method in our careers, building on what we know by moving into new but adjacent spaces; doing so allows us to use what we know, learn the "new" in the adjacent space, and become experts in an even broader surface area, as we see in Figure 13.3.

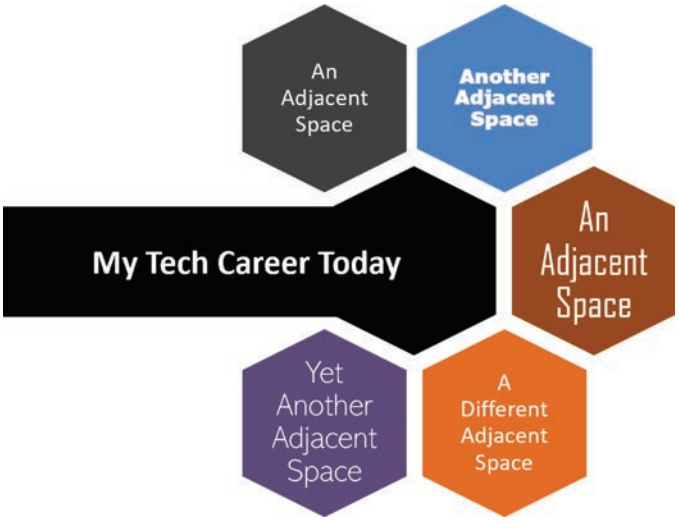


FIGURE 13.3
Consider how we might navigate Adjacent Spaces throughout our careers as a way to incrementally transform ourselves in a low-risk kind of way.

Companies and organizations do the same thing as they explore incremental markets or make minor progress on the fringe of what they already know and do. This strategy is fine for a while…but eventually what we've focused on and known for years becomes obsolete in some kind of way. Or we grow bored with the known or simply see more opportunity around the known than remaining inside the known.

How might we apply this same "adjacent spaces" mindset to the next release of our application platform or software drops? What can we do to keep our users relatively comfortable while we introduce new capabilities or interface changes?

Loosely based on Stuart Kauffman's perspectives on growth in his book *Investigations* (2002), Adjacent Space Exploration can help us identify areas where we can incrementally grow and iterate on (at least some of) what we already know. Walking out into the unchartered waters or white space *surrounding* what we already know and do today helps us think and take the next steps toward a new but likely familiar future. It's easy because of what remains the same; what we know and what surrounds what we know are more similar than they are different.

Working Through Uncertainty and What's Next

Sometimes we have no choice but to live with and work through the uncertainty in front of us and the ambiguity surrounding us—and we need to figure out and take the Next Best Step. We have covered how Pattern Matching and Fractal Thinking can help us envision what's next, how Adjacent Spaces can reduce the risk of that next step, and how mapping Possible Futures and Aligning Strategies to long-term, mid-term, and short-term Time Horizons can be helpful. But we've only scratched the surface when it comes to techniques and exercises useful for working through uncertainty. In the next several pages, we will cover seven more ways of creating clarity while we take the best step forward.

Design Thinking in Action: "What, So What, Now What?"

Without wallowing in the past, it can be useful to consider what happened, its consequences, and what to do next in light of those consequences. This might not be the best strategic next step, but it helps us navigate the road ahead while we consider other options in parallel.

Sometimes playing a game is the easiest way to work through a problem, especially if we need to make some quick forward progress to get unstuck or just don't have the appetite to get bogged down in petty details. An easy such game is the "What, So What, Now What?" exercise, which can help us learn enough to break free of indecision and move forward.

Management scientists Chris Argyris and Peter Senge, in their *Ladder of Inference* model published in 1990, introduced this approach. The idea is to work through a recent event and view it through the questions and lenses of

1. What? We need to discuss the *what* (that happened) associated with an event.
2. So what? We need to discuss the implications or consequences of the event.
3. And now what? We need to conclude with next steps and possible do-overs.

This simple three-step process is a great exercise for new tech teams, executive committees, and initiative leaders to explore a current problem or situation. "What, So What, Now What?" teaches an uncomplicated way to approach potentially difficult problems or situations. It also opens the door to determining the next best step while having healthy conversations about how to tackle these same situations more effectively in the future.

Design Thinking in Action: MVP Thinking

Many of us are familiar with the term *Minimum Viable Product*, or MVP. An MVP is that earliest version of a capability or product that meets the minimum needs of a person or community. An MVP isn't the best in terms of functions or features, but it's sufficient (and perhaps Good Enough, as we discussed in Hour 11).

Exercising MVP Thinking is nothing more than thinking through what a Minimum Viable Product or capability is in the hands of another. It is also "seed thinking" in the sense that an MVP, like a seed, will become much more when it is cared for, watered, and nurtured.

When we are faced with identifying the next best step, use MVP Thinking to determine if we can either create a simple MVP or elaborate on an existing MVP; either strategy can safely take us to the next step. By way of example, we might feel overwhelmed with a goal such as "get a doctorate" or "start a business" or "reinvent my team." Rather than setting out to achieve that long-term goal, though, consider instead what the MVP looks like for each of these goals. What's the first or next best step to take on each respective journey? By tackling the smaller goal, we are steps closer to achieving the larger and more difficult goal.

How? Carve out the minimum level of achievement, capability, or functionality that gets us to our goal. Call that minimum bar a Minimum Viable Product or MVP and take the first baby step:

- Do we want to pursue a doctorate? Use MVP Thinking and start with a one-year or two-year degree.
- Do we want to open our own business? Use MVP Thinking and start with a simple Schedule C sole proprietorship.
- Do we wish to learn more about e-commerce and websites? Use MVP Thinking and start by volunteering or helping others build a website, or by taking an online or Linked Learning course.
- Are we thinking about a career in project management and need some real experience before we can get hired for such a role? Again, use MVP Thinking! Start by running small projects at home, for the church, or for the neighborhood or community. Take some low-cost training from ExpertRating.com and in the process earn a basic project management certification. Call this basic certification our MVP, but don't stop there. Build on this MVP by completing a PMI CAPM certification. And once we meet the required project management experience necessary for certification, study for and pass the PMI PMP certification.

As we see in Figure 13.4, MVP Thinking helps us build on what we know. And MVP Thinking helps us validate along the way that the larger goal is indeed still worth pursuing.

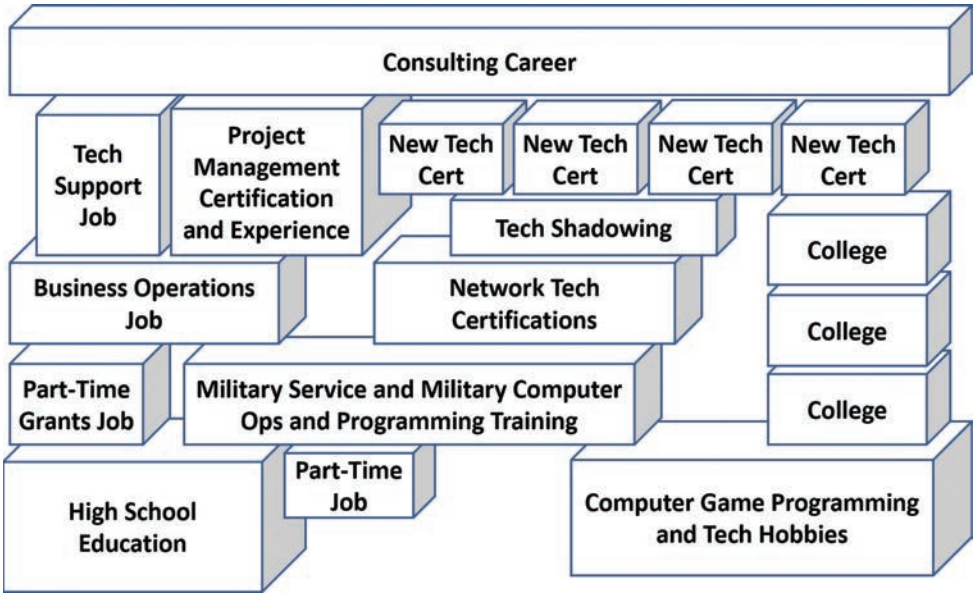


FIGURE 13.4
Use MVP Thinking to build on what we know in a low-risk way while validating along the way that our direction is still worth pursuing.

Design Thinking in Action: 2×2 Matrix Thinking for What's Next

When we need to know which way to go, sometimes it's helpful to dissect two dimensions of a situation such as effort versus time, difficulty versus importance, cost versus effort, and so on. Credited to Alex Lowy and Phil Hood in their 2004 book *The Power of the 2×2 Matrix: Using 2×2 Thinking to Solve Business Problems and Make Better Decisions*, the simple 2×2 matrix has been used for years to help people and teams evaluate a number of options across two dimensions. Considering options in this way can help us uncover the best choice or the ideal path forward. Sometimes called 2×2 Matrix Thinking, this method helps us get moving again with confidence.

Some of the most common uses of 2×2 Matrix Thinking include

- Urgency versus Importance (tasks or goals)
- Importance versus Difficulty (tasks or goals)
- Effort versus Value (tasks or goals)
- Cost versus Value (tasks or goals)
- Simplicity versus Outcome (tasks or goals)
- Power versus Interest (stakeholders)

Starting to use the 2×2 matrix is easy. For example, draw a horizonal line and label this "Importance" (we will call this the horizontal or x-axis), and then draw a vertical line and label this one "Difficulty" (let's call this the vertical or y-axis). Use these two lines as the bottom and left side, respectively, of a box. Divide that box into four smaller boxes like the example in Figure 13.5, and we now have a 2×2 matrix.

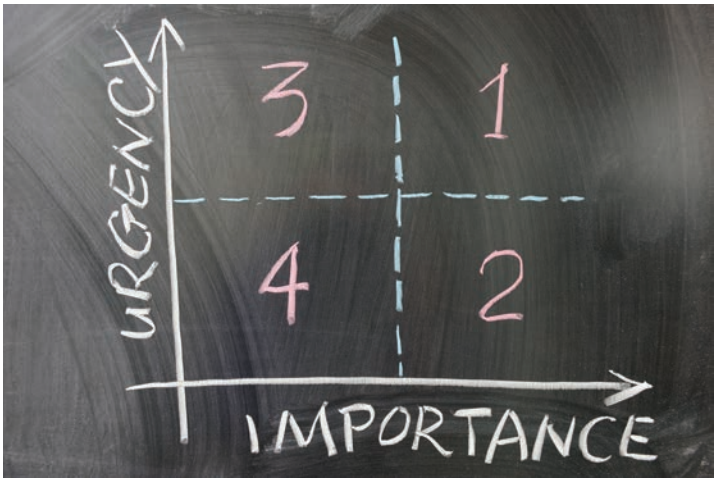


FIGURE 13.5
It is easy to draw and use a 2×2 matrix for thinking about two dimensions of a problem or situation. (raywoo/123RF)

Alternatively, simply draw a large plus sign to create a set of four open-ended boxes. And then add an x-axis and a y-axis and label those with the dimension that each axis represents.

While the process of creating and populating the matrix is useful in itself, the real value comes once the matrix is populated. For example, once an Importance versus Difficulty 2×2 matrix is populated, we can see which tasks or goals are the most important *and* the least difficult, and we would probably prioritize those items (and that entire quadrant). Conversely, we would be able to see the tasks and goals that are least important and yet the most difficult to achieve, and we would probably deprioritize those items and that quadrant. And in this way, we would gain more clarity in terms of next steps.

Design Thinking in Action: Bullseye Prioritization

When our team is stuck and we are unable to see a path forward, a special adaptation of 2×2 matrix thinking can prove useful. Called Bullseye Prioritization, this visual method combines a 2×2 matrix overlaid with a bullseye or radar image. Combined, the two images together help us make the next best choice or decision when we are presented with many possible choices or decisions.

The key to this exercise is organization. Bullseye Prioritization helps us organize the choices in front of us into the four quadrants of the matrix, and then within each quadrant organize

what's most important, what's second most important, and so on to the team (see Figure 13.6, keeping in mind that each sticky note would include the actual written choice). Visualizing each choice makes this exercise quite intuitive; the closer to the bullseye, the more important the team agrees is the choice or decision.

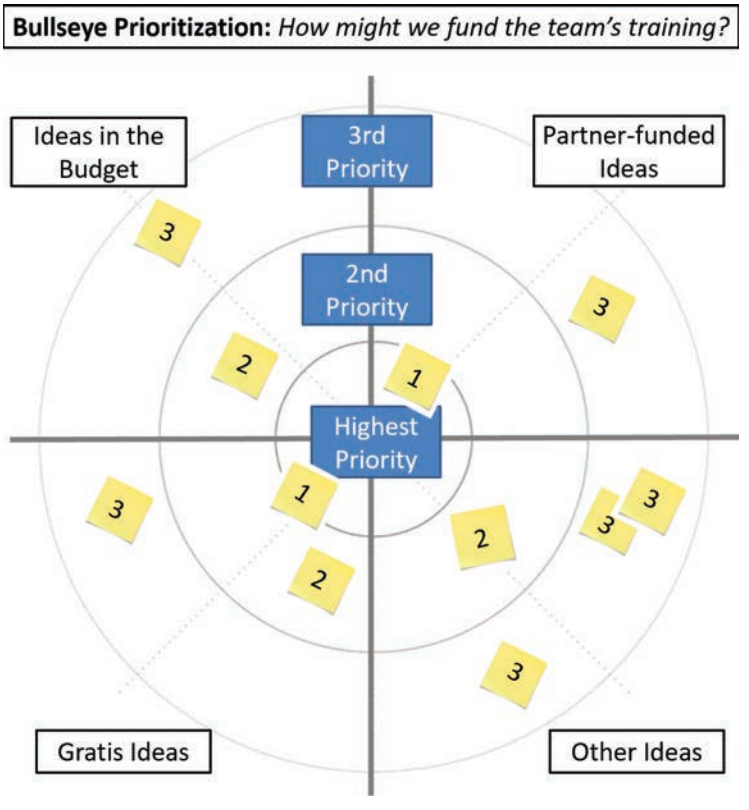


FIGURE 13.6
A quadrant-based bullseye provides two distinct dimensions for insights—one for organizing groups and another for prioritizing the items within those groups.

To execute a Bullseye Prioritization exercise for organizing and prioritizing options, invite our team or an ideation group together and then do the following:

TIME AND PEOPLE: A Bullseye Prioritization exercise requires 5–10 people for 60–120 minutes.

1. Write out the problem or situation on a virtual or physical whiteboard.
2. Off to the side on the whiteboard, round-robin through the team to create a list of options or choices related to the problem or situation. We don't want to start grouping or prioritizing yet! Simply populate this list.

3. Once the list is off to a good start, begin identifying the emerging themes and groupings. Ideally, identify three or four groupings. More is fine, but generally three to four is ideal.
4. Ask the team to label these groupings with a theme. The act of talking through labeling will help drive a shared understanding of each group (and probably help the team identify several more choices or options or list items).
5. Now draw an image of a bullseye (or radar screen or dart board) on the whiteboard and divide the image into four quadrants. Label each quadrant with a theme. Again, it's okay for starters if we have only a couple of themes.
6. Write each option or choice from our list onto a sticky note. We will place these sticky notes on the bullseye or radar screen or dart board image next.
7. Starting with the first sticky note, read it aloud to the team. Together, think about where it belongs on the image in terms of the appropriate quadrant. Place the sticky note in that quadrant and don't worry about its placement relative to the middle of the image (the bullseye) or the outer edge of the image. Simply place it into the appropriate quadrant.
8. Work through the next set of sticky notes, placing them in the appropriate quadrant.
9. As a quadrant becomes a bit crowded, the team might be inclined to start prioritizing the placement of each sticky note relative to the bullseye or center of the image. Fight the urge!
10. When all of the sticky notes are placed, now we can think about each one's importance relative to the other sticky notes in the same quadrant. Adjust how far each is from the center of the radar based on the options near it. If one option is better or more important than another, "promote" the better option closer to the center of the bullseye.
11. As the team discusses and determines one option is worse or less valuable than another, move it out toward the edge of the image. Allow room for the best options to take center stage.
12. Agree on and place the most important options at the center of the image, one sticky note per quadrant.
13. Continue prioritizing, pushing the less important options out further and further from the middle of the radar screen; the further from the middle, the less important the option.

That's it! We may wish to use different forms of democratic voting if too few voices tend to drive the prioritization effort. We need everyone weighing in with their opinions and experiences.

Similarly, if we are faced with ties or choices that are too close to call, we may wish to use another Design Thinking exercise to solve for tiebreakers. Examples of easy tiebreaker exercises include

- Use Rose, Thorn, Bud (covered next) to learn more about each option in terms of its positives, negatives, and possibilities.
- Use the Five Whys (covered in Hour 9) to better understand each option, starting by asking the team or group "Why is this option the best option in this quadrant?"
- Use "How Might We" Questioning (covered generally already and in more detail in Hour 14) to optimistically set the stage for why one option is more achievable or healthier than another option. Use this discussion to reprioritize the options.

Alternatively, if we find ourselves comparing options that sit across only two quadrants (rather than four like we can easily do with the bullseye image-based approach), consider using 2×2 Matrix Thinking. A 2×2 matrix is good for comparing a set of options against two dimensions such as cost versus value, or cost versus difficulty, or importance versus urgency. And to think about a single dimension, such as how the difficulty in implementing or executing a particular option might be reflected in the changes for and changes against that option, look to Force Field Analysis. Both of these exercises are found in Hour 14.

Design Thinking in Action: RTB for Smarter Next Steps

Created by the LUMA Institute in 2012, we use a "Rose, Thorn, Bud," or RTB, exercise to explore a particular choice in detail. The idea here is to organize together the positive, the negative, and the opportunities associated with an option or choice. Each dimension forms a group. We view our option or choice in terms of the roses, thorns, and buds it produces. In doing so, we will find aspects of a situation or choice that are good, others that are holding us back, and still others that might offer an opportunity or way out. More specifically:

- Roses are those aspects of an option or choice that are positive, healthy, or working well.
- Thorns are those outcomes or consequences that are not positive or healthy.
- Buds are the areas of potential; they represent insights and opportunities or areas for improvement. Buds are often the difference makers in choosing one option over another.

To run a simple RTB exercise, follow the steps here:

TIME AND PEOPLE: An RTB exercise requires 3–5 people for 30 minutes or longer depending on the complexity of the situation or landscape.

1. Bring together our team or group, determine whether a physical or virtual whiteboard is appropriate, and explain the situation or problem and the goal: to identify options or choices.
2. Discuss and agree on three unique types of sticky notes (including the use of an icon or emoji) for identifying the positives, negatives, and opportunities. Each unique sticky note will represent one of the three RTB dimensions.
3. Give each person a set of all three sticky notes.
4. Use something similar to the template in Figure 13.7 and ask each person to identify their first rose, thorn, and bud.

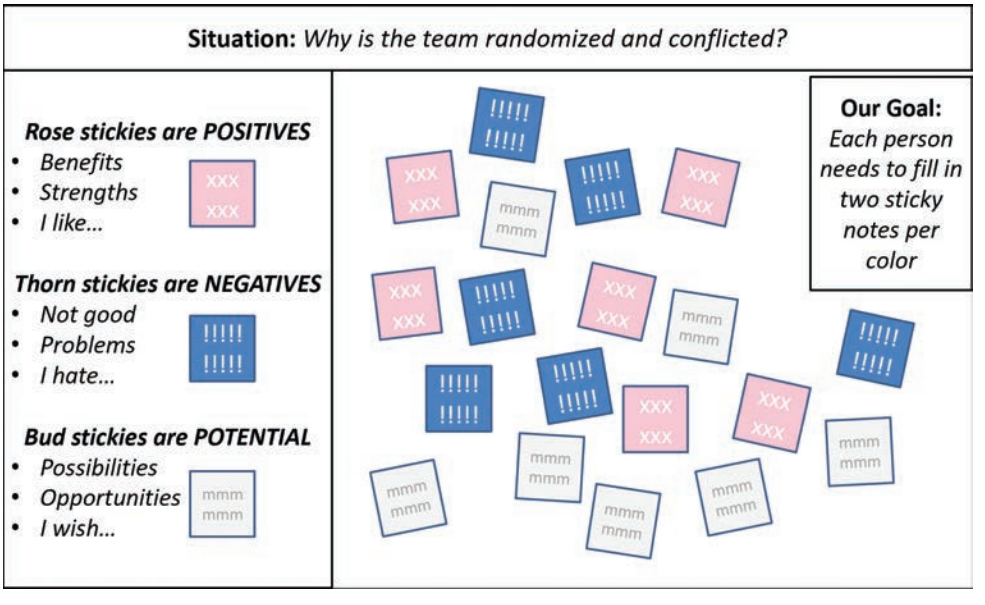


FIGURE 13.7
Use RTB to organize the dimensions of an option or choice along the lines of those that are positive, negative, or represent opportunities.

5. Round-robin through the team or group, giving each person the chance to participate.
6. When everyone has had a chance, repeat the exercise and do so through several loops. The more, the better.

NOTE

Roses Are Red, Right?

Be careful using color in an RTB exercise. Of course, we know that color isn't always the best choice for visualizing because it can exclude people with color and other visual impairments. But in the case of an RTB exercise, the most commonly used colors can cause confusion. For example, the color red often means stop or danger, but in an RTB exercise a red rose reflects something "positive." Similarly, green often means go or progress or something healthy, but in an RTB exercise, green reflects the color of stems and thorns, which are a "negative." One solution? Stick with icons and emojis instead!

Several themes will emerge in an RTB exercise, and a quick look at these themes may be enough to guide a team or group to make a choice. But in cases where multiple themes emerge, we might go back and run a Bullseye Prioritization exercise or turn instead to our next exercise, Affinity Clustering.

Design Thinking in Action: Affinity Clustering for Pattern Finding

Sometimes we are faced with so much data and so many possibilities for next steps that we just don't know how to go about sorting through and understanding what is in front of us. And doing nothing obviously doesn't help us make progress. Fortunately, we have several techniques available to provide more clarity, including the LUMA Institute's Affinity Clustering approach (LUMA, 2012).

Affinity Clustering helps us see the logical groups or clusters of options in front of us, which can help us make some initial choices and smarter next best steps. And through the exercise itself, Affinity Clustering naturally reduces some of the uncertainty surrounding seemingly complex situations.

How does Affinity Clustering work? Let's say we have recently graduated college and have dozens of options available to pursue now. Use an Affinity Clustering exercise to first sort through the options based on similarity (rather than getting bogged down looking at each option individually). For example, we might determine we have options related to the military, joining one of several small start-ups, joining one of several more established firms, striking out on our own, helping with one of the family businesses, pursuing a graduate degree, taking some time off to travel before diving into the workplace, or settling down and raising a family. We might combine several of these options as well and introduce hybrids such as working part time or pursuing a graduate degree part time or raising a family and working on our career full time.

Regardless of the myriad of choices, organize them into clusters or groups, as we see in Figure 13.8. We might organize our options around three clusters; for example, based on work, education, and personal themes.

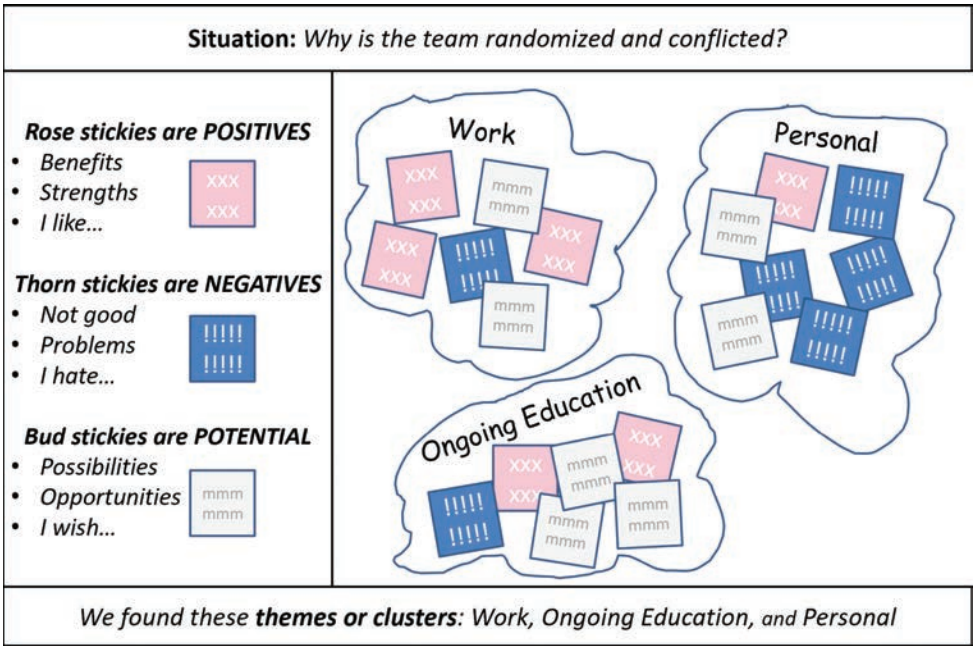


FIGURE 13.8
We may find the next best step after we organize and cluster the options in front of us.

Conversely, we might use our Pattern Matching skills to find other, less-obvious connections between our options. For example, we might create clusters or groups that are aligned by geography (options that keep us near our family, others that keep us in the state or region, and still others that are travel-based or international). We might create clusters or groups that are organized around the notion of family too (such as family-friendly options, family-neutral options, and anti-family-friendly options).

Design Thinking in Action: Buy a Feature for Consensus

When all else fails and we don't have a clear next step ahead of us, we still probably need to do *something*—some kind of next step. In this case, it's smart to gain a certain amount of consensus to move in some kind of direction with some level of unity. Use LUMA Institute's Buy a Feature exercise to prioritize and drive this consensus.

The premise for Buy a Feature is simple: The team needs to pull together a list of features, or next best steps, or options, and then align on the priority of the items in this list. They align not by words, though, but with imaginary money a la "put your money where your mouth is." If a feature or next step or option is important to many people, it will probably be given the most budget, and they come out as the clear winner. In this way, Buy a Feature draws out what each

team member truly values rather than what they might *say* they value. The money does the talking.

Note that Buy a Feature typically requires that all team members are equal and are given an imaginary $100 budget (we can change the rules, of course, and give our product manager or VP of Sales more money and hence more voter "weighting," but it's generally a good idea to keep everyone equal). Each team member is asked to allocate their imaginary money across the compiled list (of different features, or next best steps, or options). In some cases, it's better to allocate these budgets anonymously, whereas in other cases the exercise leader might wish for all participants to see one another's choices.

Whether they are passionate or on the fence about an item, a person may choose to drop their whole wad of faux cash on a single item in the list, or they may choose to spread their money around. And they may be swayed as we mentioned earlier. The choice is theirs.

And just like in the real world, unless budgets are allocated anonymously, this method creates a certain amount of tension. People tend to pair up or group up to use their influence, power, and budget to drive a choice. We need to take these kinds of actions into consideration, and further we need to take the steps necessary to drive unity again after such an exercise! It's only consensus if everyone agrees to abide by the outcome after all.

What Not to Do: The Brute-Force Path

The most difficult circumstances often lead to the most brash decisions. Sometimes these decisions are exactly what an organization needs to avoid analysis paralysis. But consider the example of a national wholesaler faced with several different "next best steps." Instead of working through these and prioritizing them with her experienced team using Bullseye Prioritization or Affinity Clustering, or gaining some level of consensus through exercises such as "What, So What, Now What?" or Buy a Feature, a fairly new mid-level executive decided the fate of the company unilaterally. She decided that the path through personal uncertainty and broader companywide and industry ambiguity was to charge ahead in a brute-force kind of "get out of the way and follow me" manner.

The executive believed in making decisions quickly but did so without the benefit of others' hard-earned experiences, expertise, and insight. She took her team down a brute-force path hoping that the journey would lift the fog and clear away the uncertainty. Instead, she lost her key leaders and six months later found herself explaining her strategy in an exit interview. "Just Do It" might be great for advertising slogans, but it is rarely the right approach when the next step is shrouded in uncertainty.

Summary

In Hour 13, we explored eleven techniques and exercises helpful in reducing uncertainty and clarifying the "Next Best Step." Along the way we explored the differences between ambiguity and uncertainty as we applied Possible Futures, Aligning Strategy to Time Horizons, Backporting into the Past, and Adjacent Spaces. Then we reviewed a collection of methods for prioritization, grouping patterns and themes, gaining consensus, and more. The hour concluded with a "What Not to Do" focused on traveling the unknown path through sheer brute force.

Workshop

Case Study

Consider the following case study and questions. You can find the answers to the questions related to this case study in Appendix A, "Case Study Quiz Answers."

Situation

While BigBank seems to be making progress across many fronts around the world, there are still key OneBank initiatives fumbling with restarts, replanning, and poorly executed next steps. Satish heard you talking about several techniques and exercises for navigating uncertainty and ambiguity. He would like you to chat with and answer the questions of several OneBank initiative leaders.

Quiz

1. How would you explain the difference between uncertainty and ambiguity in a single short sentence?
2. What technique or exercise might help a team look into the future and assess that future against a broad taxonomy of areas such as technology or economic factors?
3. If an organization wants to capitalize on what it already knows and what it already does but still transform itself incrementally, what technique covered this hour would be appropriate?
4. In what two ways does Bullseye Prioritization help a team figure out next steps?
5. Of the three horizons, which is said to be the most difficult to envision or achieve?
6. Which technique covered this hour might be useful for creating consensus when the next best step is elusive, and the team seems wishy-washy in what option they truly support?

Index

Numbers

A

B

C

D

E

F

G

H

I

J

K

L

M

N

O

P

Q

R

S

T

U

V

W

X - Y - Z